

Power, Current and Voltage Energy, Time

Edexcel International GCSE Physics · Electricity

Understand how to calculate **power** and **energy transferred** in an electric circuit.

2.4 Power

write the formula linking power, current and voltage

$$P =$$

2.5 Energy transferred

write the formula linking energy, current, voltage and time

 $E =$

Make up your own example

Choose a **current**, a **voltage** and a **time**. Calculate the **power** and the **energy transferred** — remember to give the units.

Exam-style question

[7 marks]

A hair dryer has a current of 9.6 A. The mains supply voltage is 230 V.

(i) State the formula linking power, current and voltage.

(1)

(ii) Calculate the power of the hair dryer. Give the unit.

(3)

power = _____ unit _____

(iii) The hair dryer is used for 5.0 minutes. Calculate the energy transferred. Give the unit.

(3)

energy = _____ unit _____



Calculate the electrical energy transferred when a mobile phone charger, with a current of 25 mA and a potential difference of 5 V, is used to charge a phone for 2 hours.

[5 marks]



Workings

Answer =